JUN 2 1 2001

1646

**TECH CENTER 1600 2900** 

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/776,705

DATE: 05/29/2001 TIME: 13:42:53

Input Set : A:\Seglist.txt

Output Set: C:\CRF3\05292001\I776705.raw

```
4 <110> APPLICANT: GUEGLER, Karl et al
 6 4120 - TITLE OF INVENTION: ISOLATED HUMAN TRANSPORTER PROTEINS,
         NUCLEIC ACID MOLECULES ENCODING HUMAN TRANSPORTER PROTEINS,
         AND USES THEREOF
 3
                                                                  ENTERED
10 <130 - FILE REFERENCE: CLOOTOTO
12 - 140 - CUERENT APPLICATION NUMBER: 09/776,705
13 H141 - CUBRENT FILING DATE: 2001-02-06
15 - 160 - NUMBER OF SEC ID NOS: 5
17 < \! 170 + SOFTWARE: PastSEQ for Windows Version 4.0
19 -: 210 - 3EQ ID NO: 1
20 K211 - LENGTH: 1822
31 -3312 - TYPE: DNA
32 +313 + ORGANISM: Human
24 + 400 / SEQUENCE: 1
25 coattocasa daagtoagga aagootgoad aggabtigat aaataattaa gaabagagtij60
16 ttotgaacat paacacaaag togaagaaco ttaagotgaa ggtacagtat attatttaca 1.0
17 otgaaggggo ttgtgtgtgg acaagaaago gotgacagot caaatggato ccatggaact 180
28 yagaaatgto aabatogaab bagatgatga gagbagbagt ggagaaagtg btobagatag 240
.9 otabutbagg ataggaaatt bagaaaaggo agbaatgago agtbaatttg btaatgaaga 300
30 babtgaaagt bagaaattoo tgabaaatgg atttittgggg aaaaagaago tggbagatta 360
31 tgotgatgaa daddatooog gaaddadtto dtttggaatg tottcattta acotgagtaa 420
32 tgodatdatg ggdagtigga tootgggott gtodtatgod atggddtada daggggtdat 480
33 actititata atcatgotgo tigotgiggo aatattatba oligiaticag tibaccitti 540
34 attaaaaaca gocaaggaag gagggtottt gatttatgaa aaattaggag aaaaggcatt 600
35 tygatygoog ygaaaaatty yagottttyt ttodattaba atyboayaaba ttygaybaat 660
36 gtoaagotac etetttatea ttaaatatga actacetgaa gtaateagag catteatggg 720
37 acttgaagaa aatactggag aatggtacct caatggcaac tacctcatca tatttgtgtc 780
38 tyttygaatt attetteeae titegeteet taaaaattta gyttateity getataeeay 840
39 tygattttot ottacotyca tyytyttttt tyttaytyty ytyatttaca agaaattoca 900
40 aatacootgo cototacotg tittggatca cagtgttgga aatotgtcat tcaacaacac 900
41 gottocaatg catguggtaa tgutacocaa caacteugag aguteugaug ugaacuteau 1020
42 gatggattac acceacegea atcetycagg getggatgag aaccaggeca agggetetet 1000
43 teatqacagt ggagtagaat atgaagotea tagtgatgab aagtgtgaac ocaaatactt 1140
44 tytattoaac toocggaegy cotatycaat tootatoota ytattigott ttytatyoca 1.00
45 ocotgaggto ottobbatot abagtgaabt taaagatogg toboggagaa aaatgbaaab 1260
46 ggtgtoaaat atttocatca oggggatgot tgtoatgtac otgettgoog ecetetttgg 1:20
47 ttacctaacc ttotatggag aagttgaaga tgaattactt batgobtaca gcaaagtgta 1300
48 tacattagac atcostotto toatggttog cotggsagto sttgtggcag taasacaaac 1440
49 tytygoddatt ytdotottod paattoytab atbaytyatb abaotyttat ttoocdaacy 1500
50 accepticage tygatacyae atticetyat tycagetyty ettattycae tiaataatyt 1960
51 totgytoato ottytyodaa otataaaata batottogya tibatagygy ottottotyo 1620
52 saotatgotg attititatio tipoagoagi tititatott aaacitgica agaaagaaac 1880
53 tittaggica occeasaagg teggggetti aattiteett giggtiggaa tattetteat 1740
54 yattagaago atqibabtba ttataattija biggattiat gatbetbbaa attibbaajba 1500
55 toactaacac aaygaaaaat ac
57 -210 - SEQ ID NO: 2
```

58 <211 / LENGTH: 547

RAW SEQUENCE LISTING

DATE: 05'29/2001 PATENT APPLICATION: US/09/776,705 TIME: 13:42:53

Imput Set : A:\Seqlist.txt

Output Set: C:\CRF3\05292001\I776705.raw

59 <3125 TYPE: PRT 60 </13 ORGANISM: Human 62 <4000 SEQUENCE: 3 63 Met Asp Pro Met Glu Leu Arg Ash Val Ash Ile Glu Pro Asp Asp Glu 10 Gb Ser der Ser Gly die Ser Ala Pro Asp Ser Tyr Ile Arg Ile Gly Ash 2 () 2. % Ser Glu Lys Al: Ala Met Ser Ser G.n She Ala Asn Glu Asp Thr Glu 69 Ser Gln Lys Phe Leu Thr Ash Gly Phe Leu Gly Lys Lys Lys Leu Ala 70 50 55 71 Asp Tyr Ala Asp Glu His His Pro Gly Thr Thr Ber Phe Gly Met Der 73 Ser Phe Asr. Lea Ser Asr Ala Ilo Not Gly Ser Gly Ile Lea Gly Lea 3 S 40 75 Sur Tyr Ala Met Ala Tyr Thr Gly Val Ile Leu She Ile Ile Met Leu 5 1.00077 Leu Ala Val Ala Ile Leu Ser Leu Tyr Ser Val His Leu Leu Leu Lys 120 115 79 Thr Ala Lys Glu Gly Gly Ser Leu He Tyr Glu Lys Leu Gly Glu Lys 135 14081 Ala Phe Gly Trp Pro Gly Lys II:e Gly Ala Phe Val Ser II:e Thr Met 1.50 155 83 Gln Ash Ile Gly Ala Met Ser Ser Tyr Leu Phe Ile ile Lys Tyr Glu 170 1.65 85 Leu Pro Giu Val Ile Arg Ala Phe Met Gly Leu Glu Glu Asn Thr Gly 1801 ~ 5 87 Glu Trp Tyr Leu Ash Gly Ash Tyr beu Ile Ile Fhe Val Ser Val Gly 195 200 205 89 Ile Ile Leu Pro Leu Ser Leu Leu Lys Ash Leu Gly Tyr Leu Gly Tyr 215 220 91 Thr Ser Gly Phe Ser Leu Thr Cys Met Val Phe Phe Val Ser Val Val 230 235 93 Ile Tyr Lys Lys Phe Gir Ile Pro Cys Pro Leu Pro Val Leu Asp His 245 250 95 Ser Val Gly Ash Leu Ser Phe Ash Ash Thr Leu Pro Met His Val Val 260 245 97 Met Leu Pro Ash Ash Ser Glu Ser Sor Asp Val Ash Phe Met Met Asp 275 28.0 99 Tyr Thr His Ard Ast. Pro Ala Gly Lou Asp Glu Ast. Gln Ala Lys Gly 230 295 101 Ser Leu His Asp Ser Gly Val Glu Tyr Glu Ala His Ser Asp Asp bys 310 315 103 Cys Glu Fro Lys Tyr Phe Val Phe Asn Ser Arg Thr Ala Tyr Ala Ile 325 330 105 Pro Ile Leu Val Pile Ala Phe Val Cys His Pro Glu Val Leu Pro Ile 340 345 107 Tyr Ser Glu Leu Lys Asp Arg Nor Arg Arg Lys Mot Gln Thr Val Ser 355 300

RAW SEQUENCE LISTING

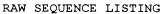
PATENT APPLICATION: US/09/776,705

DATE: 05/29/2001 TIME: 13:42:53

Input Set : A:\Seqlist.txt

Output Set: C:\CRF3\05292001\I776705.raw

```
109 Asn Ile Ser Ile Thr Gly Met Leu Val Met Tyr Leu Leu Ala Ala Leu
                            375
111 Phe Gly Tyr Low Thr Phe Tyr Gly Glu Val Glu Asp Glu Leu Leu His
                        390
                                             395
113 Ala Tyr Ser Lys Val Tyr Thr Leu Asp lie Pro Leu Leu Met Val Arg
                    405
                                        410
                                                            415
11% Leu Ala Val Leu Vai Ala Vai Thr Gln Thr Val Fro Iie Val Leu Phe
                4.12
                                    425
117 Pro Ile Arg Thr Ser Val Ile Thr Leu Leu Phe Pro Lys Arg Pro Phe
           4.35
118
                                440
                                                    445
113 Ger Trp Ile Ang His Phe Leu Ile Ala Ala Val Leu Ile Ala beu Asn
       451
                            4:5
1.11 Ash Va. Leu Val Ile Leu Val Pro Thr Ile Lys Tyr Ile Phe Gly Phe
                        470
122 465
                                            475
103 lle Gly Ala Ser Ser Ala Thr Met Leu Ile Phe Ile Leu Pro Ala Val
                                        490
115 Phe Tyr Leu Lys Leu Val Lys Lys Glu Thr Phe Arg Ser Pro Gln Lys
                                    505
107 Val Gly Ala Lou Ilo Phe Leu Val Val Gly Ile Phe Phe Met Ile Gly
            515
                                520
119 Sor Met Ala Dou Ile Ile Ile Asp Trp Ile Tyr Asp Pro Pro Ash Ser
130
       530
                            535
131 Lys His His
13.545
135 -1210> SEQ ID NO: 3
136 <211> LENGTH: 32373
137 - 212 - TYPE: DNA
138 - 213 ORGANISM: Human
140 -: 400> SEQUENCE: 3
141 agettageaa tatggateaa gaggteeaat aeetgattaa taaaagttte aggagtaaac 60
142 aaaggggaag aaatagttit titaaaatagt agaacittit tiattititag aaaatgigto 120
145 ttotatagaa gaaagabaag bettttgatt gggbegtetg batgetgagt atgatgaatt 180
144 ttaaaagoga otoacatota gtbacgtogt gatgaaagga taaggataaa aattotgaaa 240
145 teeteagaaa accategata aattatetat aaagaaataa gageeagaet cateaataga 300
146 agotagaaga gagaagttic tibaatatic tgaaggaaaa tgcttctgaa tctagaattc 360
147 aaacaattaa caaagtttga aggcaaaata aagaatttto caacatgaag caactcagaa 420
14k attotattta bagadatagg otbattgtgt gaaaaaaagtt attoaaggda ttattttagd 480
149 ataatgcaaa ataaactgaa gaaagaagat agaatgcogt tcaagaaact agcagctgag 540
150 caaqactcaq aqqttqqaqq aqqaaqccat tcaqaatqaq aaaqaqcata gaaaatttgc 600
151 titicaaagit tiqqiaatat agaattatat ticabitati atqiaqtoaa atacaccact 660
152 tegeoettag ggmatactat etakacageg ataaracege aaregoegot taregjetet 720
153 ceatgtttag assessets caggesagtt atgacaettg tttcacagas caagatgass 780
154 abattatgat bolossastig baasagtatt tiattasota aastastiag gagtigtagga 840
195 gaaggaagga aagaaagaaa aagtatgota atgtoottat tiittiatggg taaccagtot 900
156 aaaatcagta aabcaagtos sassasgottt agtgaattst tosgatotag satggotaac 960
157 tittaagtaad aagstaasaa dagasadogt daatagtggt tgotgotggg aagtgagadt 1020
15% ggtactgtgt gaagaatgag gaaaacettt gtactcattt agtgagttte tittititt 1080
150 ottttacoca tatgoatgto ttacttotat tototottag ottttaacot gottotttto 1140
100 atottttatg tatatacatt taggotgoot tatattaata atagtttoat tittgttoot 1200
```



DATE: 05/29/2001 PATENT APPLICATION: US/09/776,705 TIME: 13:42:53

Input Set : A:\Seqlist.txt

Output Set: C:\CRF3\05292001\I776705.raw

						tttattttta	
						aattototat	
						ccattcctct	
						gagtqatttc	
145	cacagatoty	totttbaatt	ttataagtot	toottoagot	gagtttttt	aaatttcaat	1 :
100	gattotattt	ttttstttt	tttaagaatt	costituti	activititg	caacagootg	$1 \leq i \leq i$
167	ttotocttt	atautestt	ataatgtttt	tattetjtga	aagttattot	ottattttga	16.70
165	atgttttctt	tcaaaatgto	tttctttta	ttuatttaat	gtaaaagtss	stittaaatt	$1\omega\theta$ 0
1,	gatttgttat	ttgtagttdd	ttagatgtga	attttatcat	ttottgtgss	tactqqcact	1 40
1 70	obtgotagtg	agtttddatg	tgtgttstat	atyttttgta	atttgaggat	gtgaactttt	1 = 0.0
						agayytatta	
1 :.:	ccatgtggta	gtttatgttt	gtdagaggaa	tagdadattt	tgtgacttct	ggaydaattt	1 -00
1 3	ttatgttagt	ttototypto	aagatttost	tatcaaatgg	gtattgcaca	tgtpatgabb	1 > 30
						attgaatgaa	
						tcaaggcatt	
						aatgaggtoo	
						gaggotaasa	
175	totagatoto	tttgttgtta	aaatacat.tt	taatttgaca	cagatgatga	gtaatgotga	2280
						daggatocaa	
						atcaagcatt	
						ttotagttat	
						acaatttact	
						ttoottgaag	
						acctgocatt	
						gtaatttoot	
						ggatttgott	
						acaaaatgta	
						ttgtgttatg	
			-		_	gotgaaggta	
			aggggcttgt				:000
			aatgtcaaca				3060
			atogggatag	-			510
			gttocatgga				-180
			tggatttatt				3240
			tggtootgaa		-		2300
			caatgtottt				4,560
			tottatottt				3420
			attttatata				3480
	_	-	ccaaatatat	-		-	-540
	,	,	totgaatgto				×600
			aaagttaaac				4660
						actgctatca	
						daadggtdag	
			ottattaatg			_	3840
			ggootacatt				(900) 
			geteteetet				3960
			aatcaattto				$4 \cap 2 \oplus$
						tootttgtga	
203	totgttottg	acctycccct	ectification	tttttgdset	stosstattt	gttacttgtt	4140



DATE: 05/29/2001 PATENT APPLICATION: US/09/776.705 TIME: 13:42:53

Input Set : A:\Seqlist.txt

Output Set: C:\CRF3\05292001\I776705.raw

210 geottemete attetgetee mastgeetigg amtempteme etgeteeese tittetseytig 4200  $\odot 11$  tigacacete teateettea agaateaget caacateagg teteetatge ageettitee 4260 ${f \#12}$  aaattactot actoopecat gtagaagtga etgeocotee fitoatgtace otetoeetgt  ${f \#3.0}$  $\pm 13$  goagatgita attacqceae tabtacaggi taaiqqceib tqitqqteeba ceaectgeea  $4.7\pm 0$ .14 cattytotgy typacaytya ytypacaata yttatttyat aaytoaatty atttobbaba  $4440\,$  $\otimes 1^{\circ}$  adabyttata toaaastyta oatyatttaa yatyotoaya agygaattti tyaboaaatt 4:0 $\odot 10^{\circ}$  taggogtgaa atagagaata tigigotbaa ablaagabii oloabiittat tiabaabbb  $47.60^{\circ}$  $\odot 17$  daggaaaato batbaggaga aabtabbgtt ottoottoaa qtagbtbagt gbaatgaabt 40.00.318 tragggargt oggadragag agyddaetga gargtaaatt atagdattii obaaattagg 4080 $_{
m CIP}$  tyabobttga agaaababta yggtgotaga agaragggot tiggagtbtg bagagtagtt  $_{
m CP}$ . On goodgaptit agagaagety titigipootot titjagottoa atggaaaaty taaaaatggba  $4\pi00$  $\pm 31$  aaddaadago tyottttaaa gyatgagatg ggcgabbaga atatagatga battsaatad  $4\pm 60$ LUD titititatia officialita actioattac actoattac decagtaaa titgaticaaa cotgaggatig  $4 \times 0$ ... 13 tittotgaaag goatgoadad aaatatgago totgoogagg titgacagagt taaaggggad 4960 224 acceptoctaa gaactyteat aytyteatto casttyated toaaaaageda gaytagaaag 5040 I/15 agoatgaatg ottitottaa gottoatgoa atgtyttoog aaccactcac agtgacttac 5100 ./20 ottitatoto otygottaaa basagyadat bastiigeay tiittaaaaat bagiitaaay 8100 .27 agatgggttt tatotatgtg tggtttggat tgaabbbtta aatgtaaatt tittgagaaat 5220 ule beaacataat gtatitatit gigateatta tactigigit tibaatabat googgotig \$240 ULP gtatoaaaab abstaabata ooggggadat tootbatota bittatabaa tootggdatg 5040  $\pm 30$  thaaatgach acaachdate boatgecaaa ahaagaabat gcaaatgech caaagaaaga 5400UB1 aaatotytti aestiesaaat teisaatett aaaaaestast atggaataca gattitagit 5400 7.32 battgattaa aataaagatt obagagttta aattotaggt ggbabttetg tittitatagt 5.520.33 deteaggede attitagget teattitate eigitatete agisticeaac igigaacati 5580 134 atqtaccaqt ottoacataq caqqtacatt wattacaqac cattaatqta aaccacaaaa 5640 .35 gagtggtggg bagtgggtgg ggggtgaatg gaaatggaaa gaggbaabaa btgagggbat 5700 236 tgtgotttot gtgagaaata tggggagaag gotaggaaat gttottaact tgtgtactca 5760 237 gagetattta typettyagt tetagaaaag cacatacaac titigtggtit ogigtgitgi 5820 238 tictatotae atotoataet gittiotati etoaaaaagt aacceigtea teeteittee 5880 139 totocagatt attitoagga tiagottoig tiataaaaaa tagottijtao agatotoota 5940 240 caataattat tiistatitt attiotaagg tiiatttatt tattitattga jacagacaja 6000.41 gttteaetet tytygeeeat getygaytye aatyytysaa tetegyetea etyeaaeete 6000 142 tgootoocag gttbaagega ttotootgot toagootoot gagtagetgg gattacaggo 61.0  $\pm 43$  goodgecade ababtogget aactottogt actototagta gagacgaago otboaccatgo 6180144 tygodagyot gytottyaad tootgadotti aayttatooa oodadotday ootoddaaay (240 ./45 tgotgggatt abaggegtga gobabtgtgb btggbbtbta ggattatatt aatagaabaa 6300 .46 tottoaatta tiitaioitti piitatotti olittaaatyi aggaaatyio oliaaaattii 6360 U47 daaadootka attigaaago astittasaa toatadatag togagoatti tatataaaaa 6420 248 daadtaaaaa gootgogada oottogdagta baaaaaatgda atggdagdag daggddottat 6480 140 taattgagee bestggaaat giggeiggie elaggieegi ageeloaaaaj geoeigjeit 68400.00 gtaactgoag gagotgacca gcacagotot ataaccaagt tgtacatott ctagoctgtg 0.000.:91 todaagaaaa deagaatdad aadgototgt ggatagtgad atottaaagt titletttood 6660 1.52 toocaactor tergocages categaarig officaataat tecorrages toatscatta 6710 ...53 totqttaata atocatqtac attttqaqaq taattaaaad adatacqdac adabagaaad 6780  $\pm 54$  aaccaacaca ababacagot abbactgaat tabittobag taagagatgt atgtataaat 6240.HMS gattgtacca aaaaaaaaa aagaaagaaa ataccagota cagggcootg cotgggactg 6.000 ..%ის ottgatgoba yggggagaat ygggtotobo botgggtatg ggtgggtatg ggbotgbtgc 6.060 157 tteacettte tgagesacay ttesetatay ggatattttg aasatsagat gagataagga 7030 US8 toacagtged taggoattta ataaatatto gttgaattaa taaaatbate tgattatggt 7080

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/776,705 TIME: 13:42:54

DATE: 05/29/2001

Input Set : A:\Seqlist.txt

Output Set: C:\CRF3\05292001\I776705.raw